

PATENT

Our Docket: P-LA 1245

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	
Border and Ruoslahti	)	Group Art Unit: 1644
	)	
Serial No: 08/349,479	)	Examiner: P. Gambel
	)	
Filed: December 2, 1994	)	
	)	
For: INHIBITING TRANSFORMING	)	
GROWTH FACTOR $\beta$ TO	)	
PREVENT ACCUMULATION OF	)	
EXTRACELLULAR MATRIX	)	

Commissioner for Patents  
Washington, D.C. 20231

**DECLARATION UNDER 37 C.F.R. § 1.132**

I, Lucia L. Languino, hereby declare as follows:

1. I am currently an Associate Professor of Pathology at Yale University School of Medicine. I have been a faculty member at Yale University School of Medicine since 1994.

2. I received a doctorate in Pharmacology from the Negri Institute of Pharmacological Research, Milan, Italy in 1984. I was a post-doctoral fellow in the laboratory of Erkki Ruoslahti, M.D., Ph.D., at The Burnham Institute, known at that time as the La Jolla Cancer Research Foundation, from 1987 to 1991.

**Exhibit A**

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3. I understand that the claims pending in the above-identified application stand rejected, in part, based on the assertion that the Applicants have allegedly not shown conception prior to December 22, 1988, of the use of anti-TGF- $\beta$  antibodies to decrease the deleterious TGF- $\beta$ -induced production and accumulation of extracellular matrix (ECM) associated with a pathology or condition.

4. I was a postdoctoral fellow in Dr. Ruoslahti's laboratory during the time period Dr. Border conducted research related to the above-identified patent application in Dr. Ruoslahti's laboratory. Prior to December 22, 1988, I was asked by Drs. Border and Ruoslahti to assist in the preparation of anti-TGF- $\beta$  antibodies against amino acids 78 to 109 of TGF- $\beta$  for a stated goal of using anti-TGF- $\beta$  antibodies to inhibit TGF- $\beta$  in order to decrease the deleterious TGF- $\beta$ -induced production and accumulation of extracellular matrix (ECM) associated with a disease, including kidney disease.

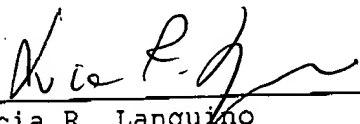
5. As evidence of my communications, prior to December 22, 1988, with Drs. Border and Ruoslahti, attached to this Declaration as Exhibit A, is a La Jolla Cancer Research Foundation animal usage form related to the project entitled "Anti-human TGF- $\beta$  Cyclized Peptide," which lists Dr. Border and myself as the investigators. The date of Exhibit A, which is prior to December 22, 1988, has been redacted. The animal usage form was submitted for the goal of generating an inhibitory antibody that would inhibit TGF- $\beta$  binding to cells and, therefore, inhibit TGF- $\beta$  activities, including ECM production.

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6. Therefore, I can corroborate, based on personal observations and communications as described in the foregoing paragraphs, that Drs. Border and Ruoslahti prior to December 22, 1988, conceived of using anti-TGF- $\beta$  antibodies to inhibit TGF- $\beta$  in order to decrease the deleterious TGF- $\beta$ -induced production and accumulation of extracellular matrix (ECM) associated with a disease, including kidney disease.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

3 / 12 / 01  
Date

  
Lucia R. Languino

LA JOLLA CANCER RESEARCH FOUNDATION  
ANIMAL USAGE FORM

AUF 1413

PLEASE TYPE OR PRINT

1. PRINCIPAL INVESTIGATOR WAYNE A. BORDER, M.D. OFFICE PHONE 226 HOME/EMERGENCY PHONE (714) 770-4602

2. OTHER INVESTIGATOR LUCIA LANGUINO, Ph.D. 230 539-0609

3. SENIOR TECHNICIAN

4. PROJECT TITLE ANTI-HUMAN TGF $\beta$  CYCLIZED PEPTIDE

5. GRANT NUMBER, IF ANY 250200 NEW ☒ RENEWAL ☐ PILOT ☐ PROJECT NUMBER

6. START DATE  END DATE  MICE ☐ RATS ☐ RABBITS 2 GPs ☐ OTHER (SPECIFY)  QUANTITY:

7. PROJECT GOAL (SEE INSTRUCTIONS)  
To produce quantities of anti-human TGF $\beta$  cyclized peptide for use in kidney disease research.

8. RATIONALE (SEE INSTRUCTIONS)  
Rabbits produce high quality antiserum which can be used for identification of human TGF $\beta$  in tissue samples and in vitro assays to study progression of kidney injury.

9. DESCRIBE USE OF ANIMALS (SEE INSTRUCTIONS)  
All injections/bleedings to be performed by animal care facility personnel.  
1. Pre-bleeding 20 ml from ear vein.  
2. Inject 500  $\mu$ g TGF $\beta$  cyclized purified peptide (0.5 ml antigen in PBS + 0.5 ml FCA) subcutaneously in 2 sites.  
3. After one month, boost with 125  $\mu$ g antigen (0.25 ml antigen in PBS + 0.25 ml incomplete adjuvant) subcutaneously, 2 sites.  
4. After 10 days, bleed 50 ml from alternating ear veins 3 times.  
5. Repeat steps 3-4 at 4-6 week intervals.

SEE ANIMAL RESEARCH COMMITTEE  
POLICY 10-1-89 - ANIMAL CARE  
PERSONNEL ONLY. NO OTHER  
ALL ANIMALS MUST BE KEPT IN  
INJECTION ROOM UNTIL 0.5 ml WHOLE  
AND/OR PLASMA IS COLLECTED FOR  
ANALYSIS. SEE IN THIS  
RESEARCH PROTOCOL

10. PAIN LEVEL A x B  C  (IF B OR C READ INSTRUCTIONS. PROVIDE DESCRIPTION OR JUSTIFICATION HERE)

CONFIDENTIAL

11. EUTHANASIA (SEE INSTRUCTIONS)  
DURING PROJECT ☐ METHOD OR TECHNIQUE  CO. ☐ CERV. DISLOC. ☐ RETAIN CARCASSIES) YES ☐  
END OF PROJECT ☒ O.D. ☒ OTHER (SPECIFY)  FOR PI NO ☒

12. SIGNATURES  
PI WA Border DATE 1/1  
AF  DATE   
MGR

U2 05334